September 24, 2003

MODIS sensor Working Group (MsWG) Summary

Attendance: Peter Abel, Bill Barnes, Bob Barnes, Vincent Chiang, Bruce Guenther, Ed Kearns, Gerhard Meister, Chris Moeller, Vince Salomonson, Junqiang Sun, Gary Toller, Jack Xiong, Eric Vermote, Ken Voss, Zhengming Wan, Joe Esposito

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Scheduled Items

Item 1 Instrument Status

JX) Both instruments are working fine. Calibrations are being preformed as usual.

Item 2 MCST Recent Analyses

Aqua

JX) MCST is planning to look at Aqua RVS over the first year. Lunar and SD calibrations together do not show the same wavelength trend as for Terra.

Terra

JX) Workshop with Ocean Team (9/15-16) left some unresolved issues to be investigated for removing oscillations from Terra m_1. MCST will look at temperature coefficients for the focal planes. Eugene Waluschka will include frame dependence to his SD screen modeling.

For the Ocean Bands (B8-16) the pre-launch BRF cannot be validated on-orbit directly due to detector saturation, however MCST is looking at lumping together the SDS vignetting with the BRF from Yaw maneuver data in order to deal with both effects simultaneously. Pre-launch BRF errors can produce m_1 oscillations.

MCST would like to do another Terra DSM to see if the thermal RVS changes with time. B31-32 have small BOS and EOS differences but B36 is large.

BG) Has MCST looked at the Terra DSM data for each mirror side?

JX) The differences from comparing DSM RVS mirror side ratio to existing RVS ratio is small.

BG) Has the Terra DSM RVS been compared to early NADIR door results to see if there are changes with time?

JX) Another DSM will lead to RVS vs. Time dependence. MS comparison of closed NADIR door to DSM yields small differences. This shows that the relative RVS is well characterized but does not yield an absolute RVS.

Item 3 Issues on Aqua Reprocessing

JX) MCST is working on updating the Lunar calibration for Aqua using Kieffer's newest lunar libration results on 1 year of Aqua data. Aqua results showed consistency with Terra after the corrections.

Correcting the SD sun angles for the MYD03 offset makes resulting m1's better for Aqua. Robert Wolfe will update PGE03 to make SD angles independent of changes to the spacecraft orientation used to correct the L1A geolocation. Thus, after this is done, L1A products will carry the correct SD angles. This is expected before Aqua reprocessing.

Other Aqua reprocessing issues were discussed at the Ocean-MCST workshop and will be addressed in Wayne's report.

Around the Table

Participant: Eric Vermote – SD calibration earthshine issue.

JX) SD earthshine is not seen in closed NADIR door data after the "sun sets" on the SD which implies that there is no earthshine or the effect is extremely small.

EV) At the next MsWG meeting, Robert will present results comparing a band with high water absorption to a band with low/no water absorption.

JX) An SD calibration band that does not degrade can be compared to SRCA results to see if there is a trend indicating earthshine.

Participant: Bill Barnes – Gene Feldman is looking at the temperature correction. He could use focal plane detector coefficients to do his study.

BG) There are no sub-system coefficients, the tests weren't preformed. Only system level tests in TV were done.

JX) TV tests were done when the instrument was in thermal equilibrium. The effects of focal plane coefficients could not be pulled out independent of the instrument (SWIR objective lens temperature) coefficients. The temperature offset on-orbit needs to be looked at.

BoB) Will get back to MsWG with Gene's results.

Participant: Bob Barnes – Jim Butler and Gene Eplee have copies of Hugh Kieffer's lunar model code (*MCST action: send data for comparison of model code to Kieffer's results*)
Hugh's funding will go away at the end of the month. We have Hugh's S-files.

Participant: Chris Moeller – We have the new granule data sent by Vincent and will analyze to look for properties in the results that differ from results presented previously.

Participant: Jack Xiong – Jim Butler and I Spoke with Ray Russell at CALCON on MODIS calibration uncertainty.

Participant: Jack/Eric – Wayne will write a report on the Ocean-MCST workshop. We need a deeper understanding of the Ocean band processing by Miami.

Next MsWG meeting October 8, 2003

Compiled by J. A. Esposito September 24, 2003